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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 09/963,526 | 09/27/2001 | Shinji Tomita | KPC-294 | 9267 |
| 23353 | 7590 | 04/20/2004 | EXAMINER | |
| RADER FISHMAN & GRAUER PLLC LION BUILDING 1233 20TH STREET N.W., SUITE 501 WASHINGTON, DC 20036 | | | SHOSHO, CALLIE E | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1714 | |

DATE MAILED: 04/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/963,526

Applicant(s)

TOMITA ET AL.

Examiner

Callie E. Shosho

Art Unit

1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/29/04 has been entered.

2. Applicants' amendment filed 1/29/04 overcomes the rejections of record.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blum et al. (U.S. 6,706,801).

Blum et al. disclose coating composition comprising 10-50% acrylic resin obtained from monomers including hydroxyalkyl (meth)acrylate, 1-15% polyisocyanate, 40-90% pigment, 0-3% catalyst, and 0-50% fine resin particles. It is disclosed that the ratio of isocyanate group in the polyisocyanate to 1 equivalent hydroxyl group in the acrylic resin is 0.5-2 and that the weight ratio of pigment to resin solid matter is 1.5:1 to 15:1 which almost completely overlaps the claimed ratio of 1:1 (100:100) to 5:1 (500:100). It is also disclosed that the hydroxyl content of the acrylic resin is 0-8 wt.% or preferably 0.2-3.5 wt.% from which it is calculated that the hydroxyl number is 0-80 or 2-35 (mg KOH/g). There is further disclosed a coating method for repair comprising conducting surface treatment at part to be repaired, providing the above

coating composition, i.e. undercoating, and providing topcoat (col.1, lines 5-10, col.3, line 54-col.4, line 11, col.5, lines 32-46, col.6, lines 15-21, col.9, lines 41-60, col.10, lines 54-56, col.11, lines 8-10 and 20-23, col.13, lines 35-40 and 45-49, col.14, lines 10-12 and 25-28, col.15, line 64-col.16, line 15, and col.16, lines 61-67). Although there is no explicit disclosure of the glass transition temperature of the acrylic resin, example 7, for instance, discloses acrylic resin obtained from acrylic acid, butyl acrylate, styrene, and hydroxypropyl methacrylate from which it is calculated, using the well known glass transition temperatures of each of the components, that the glass transition temperature of the acrylic resin is approximately 70 °C.

The difference between Blum et al. and the present claimed invention is the requirement in the claims of total solid matter.

There is no explicit disclosure in Blum et al. of the total solids present in the composition. However, Blum et al. do teach mixing acrylic resin, polyisocyanate, pigment, curing catalyst, and resin fine particles and then adding water and/or organic solvent to adjust the composition to the required processing consistency (col.5, lines 32-46), i.e. the required total solid matter. It would have been within the skill level of one of ordinary skill in the art to recognize that the desired consistency or desired total solid matter of the composition depends on both the method used to apply the coating as well as the type of substrate to which the coating is applied.

In light of the teaching in Blum et al. of adding water and/or solvent to the mixture of acrylic resin, polyisocyanate, pigment, curing catalyst, and resin fine particles to achieve the desired consistency, i.e. the desired total solids, it therefore would have been obvious to one of ordinary skill in the art to control the total solids of the composition of Blum et al. to values,

including those presently claimed, depending on the method of application and desired end use of the composition, and thereby arrive at the claimed invention.

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Takahashi et al. (U.S. 6,713,551) disclose composition comprising acrylic resin possessing glass transition temperature greater than 60 °C, number average molecular weight of 1,000-15,000, and hydroxyl value of 30-300, pigment, polyisocyanate, and curing catalyst, however, there is no disclosure of the ratio of isocyanate group in the polyisocyanate to 1 equivalent hydroxyl group in the acrylic resin and no disclosure of resin fine particles.

Baumgart et al. (U.S. 6,630,537) disclose coating composition comprising acrylate resin possessing acid number of 40-240, glass transition temperature of -35 to 70 °C, and number average molecular weight of 1500-30,000, pigment, polyisocyanate, and catalyst, however, there is no disclosure of the amount of pigment and no disclosure of resin fine particles.

Fenn et al. (U.S. 2004/0039112) disclose coating composition comprising acrylic polyol possessing glass transition temperature of -30 to 100 °C, number average molecular weight of 700-10,000, and hydroxyl value of 5-500, polyisocyanate, catalyst, and pigment wherein the ratio of isocyanate group in the polyisocyanate to 1 equivalent hydroxyl group in the acrylic polyol is 0.8-2, however, there is no disclosure of the amount of pigment and no disclosure of resin fine particles.

Huynh-Ba (U.S. 6,703,452) disclose coating composition comprising acrylic polymer possessing glass transition temperature of 40-80 °C and weight average molecular weight of 700-

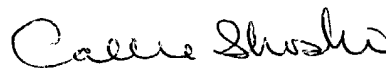
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10,000, polyisocyanate, catalyst, and pigment wherein the ratio of isocyanate group in the polyisocyanate to 1 equivalent hydroxyl group in the acrylic resin is 0.5-3, however, there is no disclosure of the hydroxyl number of the acrylic resin, the amount of pigment or resin fine particles.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Callie E. Shosho whose telephone number is 571-272-1123. The examiner can normally be reached on Monday-Friday (6:30-4:00) Alternate Fridays Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Callie E. Shosho
Primary Examiner
Art Unit 1714